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EXAMINER

YE, LIN

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/077,500

Applicant(s)

TECU ET AL.

Examiner

Lin Ye

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 3/8/2006 have been fully considered but they are not persuasive as to claims 1-24.

For claims 1, 5, 11 and 19, the applicant argues that the Tanaka reference (U.S. Patent Publication 2001/0043277) and Matsui reference (U.S. Patent Publication 2002/0048457) do not teach or suggest a camera strobe repeatedly throughout composition of a photograph, because the Tanaka reference describes only one “pre-light emission image” taken between the “S1” and “S2” positions; Matsui teaches multiple flashes as pre-flash, but does not suggest that the flashes continue throughout composition of a photograph (See applicant's REMARKS, page 7, line 25 through page 8, line 3).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

It also should be noted that The Tanaka reference discloses in page 11, [0173], during composition of a photograph, user presses the shutter button 9 to the half-pressed state S1, the flash 5 performs pre-light emission for a still image called a pre-light emission image; and the image of the subject is captured every 1/30 second by the CCD 303, see page 3, [0054]; in Figure 12, it also clearly shows **at least two pre-light emission images captured by CCD during the pre-light emission period**; and more than two frames of pre-light

emission images are displayed on the EVF 20 or LCD 10 for composition of a photograph, see page 11, [0173], lines 3-10. The live pre-light emission images displayed on the EVF 20 capable of assuring relatively high visibility in a dark environment, it becomes easy to check an image to be captured as finished image by using the EVF 20. See page 11, [0176].

Therefore, Tanaka reference clearly describes a plurality of pre-light emission images taken between the “S1” and “S2” positions.

The Matsui reference also teaches in Figure 2, the flashes (pre-flashes) continue throughout composition of a photograph until determining a condition of a right amount of light for performing an actual-flash when the photographing by the camera is performed (See, Page 1, [0015] and page 4, [0064]). The Matsui reference is evidence that one of ordinary skill in the art at the time of the invention to see more advantages the electric flash device flashing repeatedly during the composition of a photograph so that the camera is capable of measuring the subject brightness accurately even when the amount of the light reflected from the subject is small. For that reason, it would have been obvious one having ordinary skill in the art at the time of the invention was made to modify the camera system of Tanaka ('277) by providing the strobe flashing **repeatedly** throughout the composition of a photograph as taught by Matsui ('457).

For claims 23 and 24, the applicant argues that the examiner's reliance on applicant's specification is improper or misplaced, because applicant's interval of page 7 is the time between the repetitive flashes used to assist in framing. (See applicant's REMARKS, page 10, lines 19-35).

The examiner disagrees. The Applicant's interval of page 7, lines 5-18 corresponding to Figure 2, step 212 is a time interval from ending at a time of the preview photograph (preview strobes) to beginning a time of final photograph (fully depressing the shutter release, step 214). The applicant admits a camera designer of skill in the art may select the time interval could be nonexistent; and after the preview strobes, the camera could proceed directly to the final photograph. This means the time interval is nonexistent between "pre-light emission" and "light emission". The Matsui reference also teaches no time interval between the pre-flash and actual-flash. Therefore, Official Notice is taken that both the concept and the advantages of adjusting the flashing interval according the photographer's desire are well known and expected in the art. It would have been obvious one having ordinary skill in the art at the time of the invention was made to modify the camera system of Tanaka ('277) for providing the camera flashing the strobe repeatedly thought an interval beginning after a time when the shutter release reaches the partially depressed position and ending at a time when the shutter release reaches the fully depressed position and thereby saving battery energy and the time interval for taking a final photograph.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-7, 11-13 and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka U.S. Publication 2001/0043277 in view of Matsui U.S. Patent 2002/0048457.

Referring to claim 1, the Tanaka reference discloses in Figures 4 and 12-13, a camera comprising a strobe (flash 5, see page 2, [0035]) for supplying light to a scene, the strobe flashing throughout composition of a photograph (e.g., see page 11, [0173], during composition of a photograph, user presses the shutter button 9 to the half-pressed state S1, the flash 5 performs pre-light emission for a still image called a pre-light emission image; and the image of the subject is captured every 1/30 second by the CCD 303, see page 3, [0054]; in Figure 12, it also clearly shows at least two pre-light emission images captured by CCD during the pre-light emission period; and more than two frames of pre-light emission images are displayed on the EVF 20 or LCD 10 for composition of a photograph, see page 11, [0173], lines 3-10. The live pre-light emission images displayed on the EVF 20 capable of assuring relatively high visibility in a dark environment, it becomes easy to check an image to be captured as finished image by using the EVF 20. See page 11, [0176]). However, the Tanaka reference does not explicitly state the strobe flashing **repeatedly** throughout the composition of a photograph.

The Matsui reference teaches in Figures 1-2, a camera comprising a electric flash device (100, see page 2, [0032]); the photographer half-depresses a shutter release switch for making preparations of photograph (composition of a photograph, see page 3, [0057]), and the pre-flash will be performed during composition of a photograph (see page 3, [0058]); the electric flash device (100) **repeats** the discrete flash including one flash or a plurality of flashes as pre-flash (See, Page 1, [0015] and page 4, [0064]). The Matsui reference is

evidence that one of ordinary skill in the art at the time of the invention to see more advantages the electric flash device flashing repeatedly during the composition of a photograph so that the camera is capable of measuring the subject brightness accurately even when the amount of the light reflected from the subject is small. For that reason, it would have been obvious one having ordinary skill in the art at the time of the invention was made to modify the camera system of Tanaka ('277) by providing the strobe flashing repeatedly throughout the composition of a photograph as taught by Matsui ('457).

Referring to claim 2, the Tanaka and Higuchi references disclose all subject matter as discussed in respected claim 1, and the Tanaka reference discloses a preview mode (during shutter button 9 to the half-pressed S1, pre-light emission image previewed on the electric view finder 20, see page 11, [0173]) wherein the strobe flashes repeatedly (e.g., see claim 1 comments, the Higuchi reference teaches the strobe flashing repeatedly, See, Page 4, [0064]).

Referring to claim 3, the Tanaka and Higuchi references disclose all subject matter as discussed in respected claims 1-2, and the Tanaka reference discloses a user control by which the user selects the preview mode (e.g., user depress shutter button 9 to the half-pressed state for selects the preview mode, see page 11, [0173]).

Referring to claim 5, the Tanaka and Higuchi references disclose all subject matter as discussed in respected claim 1, and the Tanaka reference discloses a light sensor (CCD image sensor 303, see page 2, lines [0043]), and comparison means (overall control unit 211) for comparing a light level measured with the light sensor to a threshold value (a predetermined value BV=3, page 11, [0180]), and wherein the camera enables strobe flashes during composition of a photograph when the light level is below the threshold value, and disables

the strobe flashes throughout composition of a photograph when the light level is above the threshold value (e.g., the overall control unit 211 determines whether an image is to be captured with a flash or not by comparing the detected the brightness of environment light, see page 11, [0170]).

Referring to claim 6, the Tanaka and Higuchi references disclose all subject matter as discussed in respected claim 1, and the Tanaka reference discloses the camera comprising strobe electronics (a light control circuit) for driving the strobe, the strobe electronics having an energy storage capacity, each strobe flash during composition of a photograph dissipating less than all of the energy stored in the strobe electronics (e.g., the light control circuit 304 controlling the light emission amount of the built-in flash 5 may equal or less than the full energy stored in the flash 5 to meet a predetermined light emission amount, see page 3, [0047], lines 12-13; and the light emission amount for composition of photograph in preview mode are difference with normal light emission for capture a still image in final photograph mode which the shutter button full-pressed , see page 11, [0173], lines 13-14).

Referring to claim 7, the Tanaka and Higuchi references disclose all subject matter as discussed in respected claims 1 and 6, the Tanaka reference discloses wherein the amount of strobe energy dissipated for one strobe flash is different from the amount of strobe energy dissipated for another strobe flash (e.g., it should be noted light emission amount for each of the images captured in preview mode may be difference depending on the brightness of subject change, a light control circuit 304 controls the light emission amount of the flash 5. See page 3, [0047]).



Referring to claim 11, the Tanaka reference discloses in Figures 4 and 12-13, a method of controlling a camera comprising flashing a strobe (flash 5, see page 2, [0035]) throughout composition of a photograph (e.g., see page 11, [0173], during composition of a photograph, user presses the shutter button 9 to the half-pressed state S1, the flash 5 performs pre-light emission for a still image called a pre-light emission image or live view image; and the image of the subject is captured every 1/30 second by the CCD 303, see page 3, [0054]; in Figure 12, it also clearly shows at least two pre-light emission images captured by CCD during the pre-light emission period; and more than two frames of pre-light emission images are displayed on the ECF 20 for composition of a photograph, see page 11, [0173], lines 3-10. The pre-light emission images displayed on the EVF 20 capable of assuring relatively high visibility in a dark environment, it becomes easy to check an image to be captured as finished image by using the EVF 20. See page 11, [0176]). However, the Tanaka reference does not explicitly state the strobe flashing **repeatedly** throughout the composition of a photograph.

The Matsui reference teaches in Figures 1-2, a camera comprising a electric flash device (100, see page 2, [0032]); the photographer half-depresses a shutter release switch for making preparations of photograph (See page 3, [0057]), and the pre-flash will be performed (see page 3, [0058]); the electric flash device (100) **repeats** the discrete flash including one flash or a plurality of flashes as pre-flash (See, Page 4, [0064]). The Matsui reference is evidence that one of ordinary skill in the art at the time of the invention to see more advantages the electric flash device flashing repeatedly throughout the composition of a photograph so that the camera is capable of measuring the subject brightness accurately even when the amount of the light reflected from the subject is small. For that reason, it would

have been obvious one having ordinary skill in the art at the time of the invention was made to modify the camera system of Tanaka ('277) by providing the strobe flashing repeatedly throughout the composition of a photograph as taught by Matsui ('457).

Referring to claim 12, the Tanaka and Higuchi references disclose all subject matter as discussed in respected claim 11, and the Tanaka reference discloses the method further comprising the steps of: detecting a user control; and entering a preview mode in response to the detecting step (e.g., user depress shutter button 9 to the half-pressed state for selects the preview mode, see page 11, [0173]).

Referring to claim 13, the Tanaka and Higuchi references disclose all subject matter as discussed in respected claims 11 and 12, and the Tanaka reference discloses further comprising the steps of: exiting the preview mode; and suspending the repeated flashes of the strobe (when the user full-pressed shutter button 9 for exiting the preview mode to capture a final still image, the strobe 5 flashes normally which means suspending the pre-light emission as repeated discrete flash taught by Higuchi reference, see page 11, [0173]).

Referring to claim 15, the Tanaka and Higuchi references disclose all subject matter as discussed in respected claim 11, the Higuchi reference discloses preview photograph taken during composition of a final photograph in determining the proper strobe energy to use in taking the final photograph (e.g., at the time of the pre-flash, the photometry circuit 45 measures the amount of the light reflected from the subject; and obtains the information of subject brightness, the arithmetic and control circuit 41 performs an operation of an amount of light required for performing the light amount of actual-flash for the final photograph, see page 4, lines [0065]).

Referring to claim 16, the Tanaka and Higuchi references disclose all subject matter as discussed in respected claim 11, and the Tanaka reference discloses the method further comprising dissipating less than all of the energy storage capacity of the strobe electronics with each flash of the strobe during composition of a photograph (e.g., the light control circuit 304 controlling the light emission amount of the built-in flash 5 may equal or less than the full energy stored in the flash 5 to meet a predetermined light emission amount, see [0047], lines 12-13; and the light emission amount for composition of photograph in preview mode are difference with normal light emission for capture a still image in final photograph mode which the shutter button full-pressed, see page 11, [0173], lines 13-14).

Referring to claim 17, the Tanaka and Higuchi references disclose all subject matter as discussed in respected claims 11 and 16, the Tanaka reference discloses wherein the amount of strobe energy dissipated for one strobe flash is different from the amount of strobe energy dissipated for another strobe flash (e.g., it should be noted light emission amount for each of the images captured in preview mode may be difference depending on the brightness of subject change, a light control circuit 304 controls the light emission amount of the flash 5. See page 3, [0047]).

Referring to claim 18, the Tanaka and Higuchi references disclose all subject matter as discussed in respected claims 11, the Tanaka reference discloses the method further comprising the steps of: measuring the scene lighting level using a light sensor (CCD sensor 303); and comparing the scene lighting level with a threshold value (a predetermined brightness value  $BV=3$ , see page 11, [0180]); and enabling the strobe flashes (flash 5) during composition of a photograph when the scene lighting level is below the threshold value and

disabling the strobe flashes during composition when the scene lighting level is above the threshold value (See page 11, [0170] and page 3, [0047])

Referring to claim 19, the Tanaka reference discloses in Figures 4 and 12-13, a camera comprising strobe means (flash 5, see page 2, [0035]) for supplying light to a scene; and electronics means (a light control circuit 304, see page 3, [0047]) for driving the strobe; and logic means (overall control unit 211, see page 11, [0170]) for controlling the strobe and electronics means, wherein the logic means (211) flashes the strobe throughout composition of a photograph performed by a user of the camera (e.g., see page 11, [0173], during composition of a photograph, user presses the shutter button 9 to the half-pressed state S1, the flash 5 performs pre-light emission for a still image called a pre-light emission image or live view image; and the image of the subject is captured every 1/30 second by the CCD 303, see page 3, [0054]; in Figure 12, it also clearly shows at least two pre-light emission images captured by CCD during the pre-light emission period; and more than two frames of pre-light emission images are displayed on the ECF 20 or LCD 10 for composition of a photograph, see page 11, [0173], lines 3-10. The live pre-light emission images displayed on the EVF 20 capable of assuring relatively high visibility in a dark environment, it becomes easy to check an image to be captured as finished image by using the EVF 20. See page 11, [0176]). However, the Tanaka reference does not explicitly state the strobe flashing **repeatedly** throughout the composition of a photograph.

The Matsui reference teaches in Figures 1-2, a camera comprising a electric flash device (100, see page 2, [0032]); the photographer half-depresses a shutter release switch for making preparations of photograph (See page 3, [0057]), and the pre-flash will be performed

(see page 3, [0058]); the electric flash device (100) **repeats** the discrete flash including one flash or a plurality of flashes as pre-flash (See, Page 4, [0064]). The Matsui reference is evidence that one of ordinary skill in the art at the time of the invention to see more advantages the electric flash device flashing repeatedly during the composition of a photograph so that the camera is capable of measuring the subject brightness accurately even when the amount of the light reflected from the subject is small. For that reason, it would have been obvious one having ordinary skill in the art at the time of the invention was made to modify the camera system of Tanaka ('277) by providing the strobe flashing repeatedly throughout the composition of a photograph as taught by Matsui ('457).

4. Claim 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka U.S. Publication 2001/0043277 in view of Matsui U.S. Patent 2002/0048457 and Iwai U.S. Patent 5,198,855.

Referring to claim 4, the Tanaka and Higuchi references disclose all subject matter as discussed in respected claims 1-3, and the Tanaka reference discloses the user selects the preview mode by depressing shutter button (9) to the half-pressed state (see Tanaka reference page 11, [0173]) and the strobe flashes repeatedly throughout the composition of a photograph (e.g., see claim 1 comments, the Higuchi reference teaches the strobe flashing repeatedly, See, Page 4, [0064]). However, the Tanaka reference does not explicitly show the user control also has two setting, the first setting allows strobe repeatedly flashing and second setting stops strobe flash during the composition of a photograph (preview mode).

The Iwai reference teaches in Figure 2, an exposure compensation device of a camera for composition of a photograph comprising a user control device (a mode select switch 1, see Col. 3, lines 38-40); modes which can be selected by the user control device are five kinds. A first mode is an Auto mode for flashing an electronic flash device 3 automatically when field brightness is darker than a predetermined light value. A second mode is an ON mode for flashing the electronic flash device 3 regardless of the field brightness. A third mode is an OFF mode for prohibiting a flashing of the electronic flash device 3, etc (See Col. 3, lines 40-50). The Iwai reference is evidence that one of ordinary skill in the art at the time of the invention to see more advantages the user control has at least two settings, one for allowing a flashing of the flash device repeatedly (ON mode) and second for prohibiting a flashing of the flash device regardless the field brightness (OFF mode), so that user has more flexible options to control the flash device associating with composition of a photograph. For that reason, it would have been obvious one having ordinary skill in the art at the time of the invention was made to modify the camera system of Tanaka ('277) by providing a user control that includes two setting, in response to the first setting of the user control, the strobe flashes repeatedly throughout the composition of a photograph; and in response to a second setting of the user control, the strobe does not flash during the composition of a photograph as taught by Iwai ('855).

Referring to claim 14, the Tanaka and Higuchi references discloses all subject matter as discussed in respected claims 11-12, and the Tanaka reference discloses the user selects the preview mode by depressing shutter button (9) to the half-pressed state (see Tanaka reference page 11, [0173]) and the strobe flashes repeatedly during the composition of a photograph

(e.g., see claim 1 comments, the Higuchi reference teaches the strobe flashing repeatedly, See, Page 4, [0064]). However, the Tanaka reference does not explicitly show the user control also has two setting, the first setting allows strobe repeatedly flashing and second setting stops strobe flash throughout the composition of a photograph (preview mode).

The Iwai reference teaches in Figure 2, an exposure compensation device of a camera for composition of a photograph comprising a user control device (a mode select switch 1, see Col. 3, lines 38-40); modes which can be selected by the user control device are five kinds. A first mode is an Auto mode for flashing an electronic flash device 3 automatically when field brightness is darker than a predetermined light value. A second mode is an ON mode for flashing the electronic flash device 3 regardless of the field brightness. A third mode is an OFF mode for prohibiting a flashing of the electronic flash device 3, etc (See Col. 3, lines 40-50). The Iwai reference is evidence that one of ordinary skill in the art at the time of the invention to see more advantages the user control has at least two settings, one for allowing a flashing of the flash device repeatedly (ON mode) and second for prohibiting a flashing of the flash device regardless the field brightness (OFF mode), so that user has more flexible options to control the flash device associating with composition of a photograph. For that reason, it would have been obvious one having ordinary skill in the art at the time of the invention was made to modify the camera system of Tanaka ('277) by providing a user control that includes two setting, in response to the first setting of the user control, the strobe flashes repeatedly throughout the composition of a photograph; and in response to a second setting of the user control, the strobe does not flash during the composition of a photograph as taught by Iwai ('855).

5. Claim 8-10 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka U.S. Publication 2001/0043277 in view of Matsui U.S. Patent 2002/0048457 and Umeda U.S. Patent 5,920,342.

Referring to claim 8, the Tanaka and Higuchi references disclose all subject matter as discussed in respected claim 1, the Tanaka reference discloses an electronic array light sensor (CCD sensor 303, see page 3, [0043]); and a logic unit (overall control unit 211, see page 11, [0170]) that controls the electronic array light sensor (303) and receives image data from the electronic array light sensor; and a display (electric view finder 220) that displays an image under control of the logic unit; wherein the camera takes and displays preview photographs repeatedly on the display during composition of a final photograph by the user, and wherein the camera flashes the strobe for preview image (e.g., during composition of a final photograph, the shutter button 9 to the half-pressed state S1, the flash 5 performs pre-light emission once for each still image called a pre-light emission image; and the image of the subject is captured every 1/30 second by the CCD 303, see page 3, [0054], this means a plurality of the pre-light emission images are repeatedly previewed on the electric view finder 20 at least a predetermined period T1 as shown in Figure 12, see page 11, [0173], lines 3-10. The flash 5 performs pre-light emission once for each frame pre-light emission image; and the each of the live pre-light emission images displayed on the EVF 20 capable of assuring relatively high visibility in a dark environment, it becomes easy to check an image to be captured as finished image by using the EVF 20, see page 11, [0176]). However, the



Tanaka reference does not explicitly states camera flashes the strobe **once for each** preview image.

The Umeda reference teaches in Figure 28, the camera head (10) has a built-in flash unit (76). The flash unit is fired timing at every image capture, e.g., an image is captured four times as preview images used for composition of a high resolution image as final photograph (See Col. 14, lines 17-21). The Umeda reference is evidence that one of ordinary skill in the art at the time of the invention to see more advantages the camera flashes the strobe one for each captured preview image so that all the preview images have a the same conditions for light intensity for creating a high resolution final photograph. For that reason, it would have been obvious one having ordinary skill in the art at the time of the invention was made to modify the camera system of Tanaka ('277) by providing the strobe **once for each** preview image as taught by Umeda ('342).

Referring to claim 9, the Tanaka, Higuchi and Umeda references disclose all subject matter as discussed in respected claims 1 and 8, and the Higuchi reference states the flash duration of the discrete flash is approximately 1mS (See page 1, [0008]); when the light reflected from the subject is small, the flash device **repeats** the discrete flash as pre-flash for composition of a photograph (as preview image); and the Tanaka reference discloses the image of the subject is captured every 1/30 S by the CCD 303 for previewing, see page 3, [0054]. This means the camera flashes the strobe more often than once for each preview image when the amount of the light reflected from the subject is small.

Referring to claim 10, the Tanaka, Higuchi and Umeda references disclose all subject matter as discussed in respected claims 1 and 8-9, and the Higuchi reference discloses at least

one of the preview images uses a different number strobe flashes than another preview image (e.g., if when the amount of the light reflected from the subject is small, a plurality of flashes are repeated; and if when the amount of the light reflected from the subject is large, only a one flash is used. This means at least one of the preview images that used for measuring the subject brightness may use a different number strobe flashes than another preview image based on the whether a sufficient light amount is capable of being obtained, See page 4, [0064], lines 7-13).

Referring to claim 20, the Tanaka, Higuchi and Umeda references disclose all subject matter as discussed in respected with same comments to claims 8 and 11.

Referring to claim 21, the Tanaka, Higuchi and Umeda references disclose all subject matter as discussed in respected with same comments to claims 9 and 20.

Referring to claim 22, the Tanaka, Higuchi and Umeda references disclose all subject matter as discussed in respected with same comments to claims 10 and 21.

6. Claim 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka U.S. Publication 2001/0043277 in view of Matsui U.S. Patent 2002/0048457.

Referring to claim 23, the Tanaka reference discloses in Figures 4 and 12-13, a camera comprising a strobe (flash 5, see page 2, [0035]) for supplying light to a scene, a shutter release having a partially depressed position (S1) and a fully depressed position (S2) as shown in Figure 12; the camera flashing the strobe beginning after a time when the shutter release reaches the partially depressed position (e.g., see page 11, [0173], during composition of a photograph, user presses the shutter button 9 to the half-pressed state S1, the flash 5

performs pre-light emission for a still image called a pre-light emission image; and the image of the subject is captured every 1/30 second by the CCD 303, see page 3, [0054]; in Figure 12, it also clearly shows at least two pre-light emission images captured by CCD during the pre-light emission period; and more than two frames of pre-light emission images are displayed on the EVF 20 or LCD 10 for composition of a photograph, see page 11, [0173], lines 3-10. The live pre-light emission images displayed on the EVF 20 capable of assuring relatively high visibility in a dark environment, it becomes easy to check an image to be captured as finished image by using the EVF 20. See page 11, [0176]). However, the Tanaka reference does not explicitly state the camera flashing the strobe **repeatedly** beginning after a time when the shutter release reaches the partially depressed position.

The Matsui reference teaches in Figures 1-2, a camera comprising a electric flash device (100, see page 2, [0032]); the photographer half-depresses a shutter release switch for making preparations of photograph (composition of a photograph, see page 3, [0057]), and the pre-flash will be performed during composition of a photograph (see page 3, [0058]); the electric flash device (100) **repeats** the discrete flash including one flash or a plurality of flashes as pre-flash (See, Page 4, [0064]). The Matsui reference is evidence that one of ordinary skill in the art at the time of the invention to see more advantages the electric flash device flashing repeatedly during the composition of a photograph so that the camera is capable of measuring the subject brightness accurately even when the amount of the light reflected from the subject is small. For that reason, it would have been obvious one having ordinary skill in the art at the time of the invention was made to modify the camera system of

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Tanaka ('277) by providing the strobe flashing repeatedly during the composition of a photograph as taught by Matsui ('457).

The Tanaka reference does not explicitly show the camera flashing the strobe repeatedly thought an interval beginning after a time when the shutter release reaches the partially depressed position and **ending at a time when the shutter release reaches the fully depressed position** (in other words, the time interval is nonexistent between pre-light emission which started at S1 position and light emission which started at S2 position).

The applicant's specification discloses in page 7, lines 7-18, "... **a camera designer of skill in the art** may select a different interval based on the photographer's viewing comfort, the strobe energy capacity, the expected time that camera will be in the preview mode.... alternatively, the time interval could be **nonexistent** ....". The applicant admits a camera designer of skill in the art may select the time interval could be nonexistent; and after the preview strobes, the camera could proceed directly to the final photograph. Therefore, Official Notice is taken that both the concept and the advantages of adjusting the flashing interval according the photographer's desire are well known and expected in the art. It would have been obvious one having ordinary skill in the art at the time of the invention was made to modify the camera system of Tanaka ('277) for providing the camera flashing the strobe (pre-light emission and light emission) repeatedly throughout an interval beginning after a time when the shutter release reaches the partially depressed position and ending at a time when the shutter release reaches the fully depressed position and thereby saving battery energy and the time interval for taking a final photograph.

Referring to claim 24, the Tanaka and Higuchi references disclose all subject matter as discussed in respected with same comments to claim 23.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

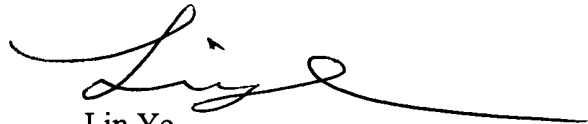
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Ye whose telephone number is (571) 272-7372. The examiner can normally be reached on Mon-Fri 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Lin Ye', with a long horizontal flourish extending to the right.

Lin Ye  
Primary Examiner  
Art Unit 2622

May 25, 2006